

# The Ultimate Project: 500 Years Until Phase E



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## Project Objective

- Extend human presence and scientific reach to a habitable terrestrial exoplanet
  - 100 year plan development
  - 100 years for detailed design
  - 100 years for prototyping
  - 100 years for construction
  - 100 year shakedown cruise

## Recent Activities

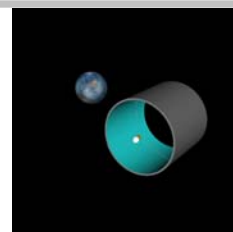
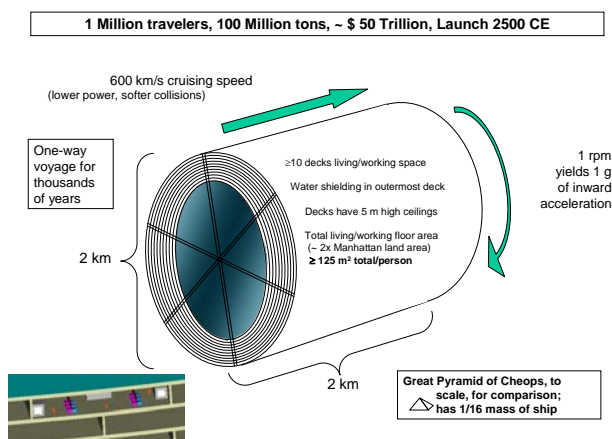
- Vision presented here in von Karman during SMC-IT '06 banquet keynote
  - Steve Kilston "The Ultimate Project, A Plausible Path to the Stars"
- Discussions about projectizing the vision through the winter of '06-'07
- Project formed during the spring of 2007
  - Initial scoping of effort and conceptual plan
  - Installation of collaboration server hardware
  - Atlassian donated Confluence and JIRA Enterprise collaboration software
- The-UP retreat planned for the summer of 2008
  - Inquiries welcome



Now what ?

- A project without borders or nationalities
- Plans will be overtaken by events
- Project draws upon and drives progress in every human discipline
  - Science
  - Technology
  - Philosophy
  - Legal
  - Financial
  - ...
- Founded on web-based collaboration infrastructure
  - IT and knowledge management are critical
- Current project organization
  - Discussion forums running phpBB software
  - Confluence wiki for project documentation
  - JIRA collaboration SW for project management
- Project participation is open
  - Members must be able to collaborate effectively
  - No political or religious divisions can be allowed

## The-UP.org Project Description



A plan & design

- Trade spaces
  - Start now or only when world is ready to go
  - Speed vs. energy requirements and risk
  - Active vs. passive collision management
  - Crewed or robotic
  - S/C size vs. number
- Examples of prior multi-generation projects
  - Great Wall of China
  - Cathedrals
- Current multi-generation projects
  - Long Now Foundation
  - Svalbard Global Seed Vault
- Cost
  - No major costs for the first 200 years
  - \$50 trillion total
  - 10 times US nuclear weapons program to date
  - A TOTAL of ~1 year's gross product for the world
  - \$200 billion/year at peak, beginning 2250 CE
  - \$50M/traveler

<http://The-Up.org>

## Significance

- The concept originated as the answer to the question:  
"If Terrestrial Planet Finder discovers a habitable exoplanet, what should we do about it?"
- The-UP seeks to make plausible a human presence in other solar systems and on exoplanets
- The project is the ultimate justification for exoplanet science, research and development
  - Brings compelling scientific, technical and societal needs of extrasolar travel into strikingly sharp focus
  - Lays out a roadmap for future research, planning and development in numerous fields

## Original Paper

1999 "The Project: An Observatory/Transport Spaceship for Discovering and Populating Habitable Extrasolar Terrestrial Planets". American Astronomical Society Paper 97.09 (Austin, TX). - Steve Kilston.